3. (Original) The array of claim 2, wherein the membrane bound protein is a G-protein coupled receptor.

4. (Original) The array of claim 2, wherein the membrane bound protein is an ion channel.

5. (Original) The array of claim 2, wherein the membrane bound protein is a receptor tyrosine kinase.

6. (Original) The array of claim 1, wherein the substrate comprises glass, metal, or plastic.

7. (Original) The array of claim 1, wherein the substrate is configured as a chip, a slide or a microplate.

8. (Original) The array of claim 1, wherein the surface is coated.

9. (Original) The array of claim 8, wherein the coating is a material that enhances the affinity of the biological membrane microspot for the substrate.

10. (Original) The array of claim 9, wherein the material confers a contact angle ranging from about 15° to 80°.

11. (Original) The array of claim 9, wherein the material is a silane, thiol, or a polymer.

12. (Original) The array of claim 9, wherein the thiol is on a substrate comprising a gold-coated surface.

13. (Original) The array of claim 9, wherein the thiol comprises hydrophobic and hydrophilic moieties.

14. (Original) The array of claim 13, wherein the thiol is a thioalkyl compound.

15. (Original) The array of claim 11, wherein the silane is on a substrate comprising glass.

16. (Original) The array of claim 11, where in the silane presents terminal polar moieties.

17. (Original) The array of claim 16, wherein the terminal polar moieties are hydroxyl, carboxyl, phosphate, sulfonate, or amino groups.

18. (Original) The array of claim 16, wherein the surface is positively charged and contains amino groups.

19. (Original) The array of claim 9, wherein the material is γ–aminopropyl-silane.

20. (Original) The array of claim 9, wherein the material is a derivatized monolayer having covalently bonded linker moieties.

21. (Original) The array of claim 20, wherein the monolayer is a self assembled monolayer.

22. (Original) The array of claim 21, wherein the monolayer comprises a thioalkyl compound or a silane compound.

23. (Original) The array of claim 22, wherein the thioalkyl is selected from the group consisting of a thioalkyl acid, thioalkyl alcohol, thioalkyl amine, and halogen containing thioalkyl compound.

24. (Original) The array of claim 23, wherein the compound is a thioalkyl acid.

25. (Original) The array of claim 24, wherein the thioalkyl compound is 16-mercaptohexadecanoic acid.

26. (Original) The array of claim 22, wherein the silane compound is selected from the group consisting of a silyl anhydride, silyl acid, silyl amine, silyl alcohol, vinyl silane or silyl acrylate.

27. (Original) The array of claim 20, wherein the linker moiety comprises a straight or branched $C_{10} - C_{25}$ alkyl, alkynyl, alkenyl, aryl, araalkyl, heteroalkyl, heteroalkynyl, heteroalkenyl, heteroaryl, heteroaraalkyl molecule comprising:

(i) a terminal functional group capable of reacting with the derivatized monolayer;

(ii) a hydrophilic spacer region; and

(iii) a hydrophobic membrane adhering region.

28. (Original) The array of claim 27, wherein the terminal functional group is selected from the group consisting of a carboxylic acid, halogen, amine, thiol, alkene, acrylate, anhydride, ester, acid halide, isocyanate, hydrazine, maleimide and hydroxyl group.

29. (Original) The array of claim 27, wherein the hydrophilic spacer region comprises n oxyethylene groups, wherein n = 2 to 25.

30. (Original) The array of claim 27, wherein the membrane adhering region comprises a straight or branched chain $C_{10} - C_{25}$ hydrophobic tail.

31. (Original) The array of claim 1, wherein the surface is nano-porous.

32. (Original) The array of claim 1, wherein the substrate is selected from the group consisting of glass, polymeric materials, and metallic substrates.

33. (Cancelled) A method for producing an array comprising:

providing a substrate having a surface;

providing a solution a biological membrane;

immersing the tip of a pin into the solution;

removing the tip from the solution to provide a solution adhered to the tip;

contacting the solution with the surface to thereby transfer the solution from the tip to the surface; and

repeating the contacting step a plurality of times to provide biological membrane microspots patterned in an array on the surface.

34. (Cancelled) The method of claim 33, wherein the solution comprises a protein.

35. (Cancelled) The method of claim 34, wherein the protein is a G-protein coupled receptor.

36. (Cancelled) The method of claim 34, wherein the protein is an ion channel.

37. (Cancelled) The method of claim 33, further comprising the step of contacting the microspot with a solution comprising a protein.

38. (Cancelled) The method of claim 33, wherein the surface of the substrate is exposed to air under ambient or controlled humidities when the tip of the pin contacts the substrate.

39. (Cancelled) A method for detecting a binding event between a probe and target compound, said method comprising:

contacting a solution comprising the target compound with an array of probe biological membrane microspots associated with a surface of a substrate, the target compound having one or more constituents, and detecting a binding event between at least one or more of the probes with one or more of the constituents of the target.

40. (Cancelled) The method of claim 39, wherein at least one of the constituents of the target is labeled and the detection step comprises detecting the presence of the label.

41. (Cancelled) The method of claim 40, wherein the detection of the label is carried out by imaging based on the radioactivity, fluorescence, phosphorescence, chemiluminescence, or resonance light scattering emanating from the bound target.

42. (Cancelled) The method of claim 40, further comprising washing the substrate of unbound target prior to the detection step.

43. (Cancelled) The method of claim 39, wherein the array of microspots is incubated with labeled cognate target, and an unlabeled target compound and the binding event between the unlabeled target compound and the probe is determined by measuring a decrease in the

signal of the label due to competition between the cognate labeled target and the unlabeled target compound for the probe.

44. (Cancelled) The method of claim 43, wherein the labeled cognate target is incubated with the array before incubation with the unlabeled target.

45. (Cancelled) The method of claim 39, wherein the target is unlabeled and binding event is determined by a change in physical properties at the interface.

46. (Cancelled) The method of claim 45, wherein the change in physical properties at the interface is a change in refractive index or electrical impedence.

47. (Cancelled) The method of claim 39, wherein the target is unlabeled and the binding of the target is detected by mass spectroscopy.

48. (Cancelled) The method of claim 39, wherein the probe biological membrane microspots comprises a G-protein coupled receptor.

49. (Cancelled) The method of claim 39, wherein the probe biological membrane microspots comprises a ion channel.

50. (Cancelled) The method of claim 39, wherein the probe biological membrane microspots comprises a receptor tyrosine kinase.

51. (Currently Amended) An array comprising a plurality of biological membrane microspots stably associated with a surface of a glass substrate, wherein the surface is coated with γ-aminopropyl-silane and the biological membrane microspots comprise a G-protein

coupled receptor and the substrate is adapted so that the microspots remain adsorbed when drawn through an air-water interface.

52. (Currently Amended) An array comprising a plurality of biological membrane microspots associated with the surface of a substrate, wherein the surface of the substrate is adapted such that the array ~~is capable of being~~ can be produced, used, or stored in an environment exposed to air under ambient humidity.

53. (Previously Amended) The array of claim 52, wherein the biological membrane microspots retain their ability to bind to a ligand when stored in air.

54. (New) An array comprising a plurality of biological membrane microspots associated with the surface of a substrate exposed to air under ambient humidity, the membrane microspots having the ability to bind to a ligand.

55. (New) The array of claim 54, wherein the biological membrane microspots comprise a membrane bound protein.

56. (New) The array of claim 55, wherein the membrane bound protein is a G-protein coupled receptor.

57. (New) The array of claim 55, wherein the membrane bound protein is an ion channel.

58. (New) The array of claim 55, wherein the membrane bound protein is a receptor tyrosine kinase.

59. (New) The array of claim 54, wherein the substrate comprises glass, metal, or plastic.

60. (New) The array of claim 54, wherein the substrate is configured as a chip, a slide or a microplate.

61. (New) The array of claim 54, wherein the surface is coated.

62. (New) The array of claim 61, wherein the coating is a material that enhances the affinity of the biological membrane microspot for the substrate.

63. (New) The array of claim 62, wherein the material confers a contact angle ranging from about 15° to 80°.

64. (New) The array of claim 62, wherein the material is a silane, thiol, or a polymer.

65. (New) The array of claim 62, wherein the thiol is on a substrate comprising a gold-coated surface.

66. (New) The array of claim 62, wherein the thiol comprises hydrophobic and hydrophilic moieties.

67. (New) The array of claim 66, wherein the thiol is a thioalkyl compound.

68. (New) The array of claim 64, wherein the silane is on a substrate comprising glass.

69. (New) The array of claim 64, where in the silane presents terminal polar moieties.

70. (New) The array of claim 69, wherein the terminal polar moieties are hydroxyl, carboxyl, phosphate, sulfonate, or amino groups.

71. (New) The array of claim 69, wherein the surface is positively charged and contains amino groups.

72. (New) The array of claim 62, wherein the material is γ–aminopropyl-silane.

73. (New) The array of claim 62, wherein the material is a derivatized monolayer having covalently bonded linker moieties.

74. (New) The array of claim 73, wherein the monolayer is a self assembled monolayer.

75. (New) The array of claim 74, wherein the monolayer comprises a thioalkyl compound or a silane compound.

76. (New) The array of claim 75, wherein the thioalkyl is selected from the group consisting of a thioalkyl acid, thioalkyl alcohol, thioalkyl amine, and halogen containing thioalkyl compound.

77. (New) The array of claim 76, wherein the compound is a thioalkyl acid.

78. (New) The array of claim 77, wherein the thioalkyl compound is 16-mercaptohexadecanoic acid.

79. (New) The array of claim 75, wherein the silane compound is selected from the group consisting of a silyl anhydride, silyl acid, silyl amine, silyl alcohol, vinyl silane or silyl acrylate.

80. (New) The array of claim 73, wherein the linker moiety comprises a straight or branched $C_{10} - C_{25}$ alkyl, alkynyl, alkenyl, aryl, araalkyl, heteroalkyl, heteroalkynyl, heteroalkenyl, heteroaryl, heteroaraalkyl molecule comprising:

(i) a terminal functional group capable of reacting with the derivatized monolayer;

(ii) a hydrophilic spacer region; and

(iii) a hydrophobic membrane adhering region.

81. (New) The array of claim 80, wherein the terminal functional group is selected from the group consisting of a carboxylic acid, halogen, amine, thiol, alkene, acrylate, anhydride, ester, acid halide, isocyanate, hydrazine, maleimide and hydroxyl group.

82. (New) The array of claim 80, wherein the hydrophilic spacer region comprises n oxyethylene groups, wherein n = 2 to 25.

83. (New) The array of claim 80, wherein the membrane adhering region comprises a straight or branched chain $C_{10} - C_{25}$ hydrophobic tail.

84. (New) The array of claim 54, wherein the surface is nano-porous.

85. (New) The array of claim 54, wherein the substrate is selected from the group consisting of glass, polymeric materials, and metallic substrates.

86. (New) An array comprising a plurality of biological membrane microspots stably associated with a surface of a glass substrate exposed to air under ambient humidity, the membrane microspots having the ability to bind to a ligand, wherein the surface is coated with γ-aminopropyl-silane and the biological membrane microspots comprise a G-protein coupled receptor.